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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,382	10/14/2003	Bruno Ancelin	KEMP-010	6317

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EXAMINER

AKHAVANNIK, HADI

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/686,382	Applicant(s) ANCELIN ET AL.	
	Examiner Hadi Akhavannik	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/22/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6, 11-14 rejected under 35 U.S.C. 102(e) as being anticipated by Besson (7092482).

Regarding claim 1, Besson discloses a method of processing an image obtained by a slot scanning radiographic imaging apparatus in which a collimated beam of illuminating radiation is transmitted through a subject to a detector (see the abstract, column 2 line 62 to column 3 line 22, and column 17 lines 59-66 as it discloses scatter compensating a slot scanning system. Also, note that the body of the claim does not breathe any life or meaning to the preamble and therefore the preamble is given no weight) ,

the method comprising the step of correcting for degradation of the image caused by scattering of illuminating radiation by applying to the image a scatter mask (column 15 lines 56-66 disclose creating a mathematical model for scatter compensation).

Regarding claim 2, Besson discloses that the scatter mask is obtained by adaptation of a full field scatter mask (column 16 lines 5-12 disclose taking into account spatial dependencies and column 17 line 59 to column 18 line 19 disclose that mask must be adapted for a slot scanning system. Also, the scatter mask used by Besson is adapted by taking into account many parameters in column 25 lines 41-60 and therefore the scatter mask is obtained by adapting the a basic scatter mask that is described in column 18 lines 37-60).

Regarding claim 3, the rejection of claim 2 discloses that the mask is optimized for a slot scanning system. Specifically see column 15 line 56 to column 16 line 12.

Regarding claim 4, Besson discloses the scatter mask is adapted to allow for the effect on scatter of the distance between the detector and the subject (column 12 line 4-24 and column 25 line 47 discloses taking air gap into account).

Regarding claim 5, Besson discloses that the scatter mask is adapted to allow for the effect on scatter of the distance between the detector and the subject by assuming that the subject extends up to the detector (see figs 3a-3c as it discloses that the subject extends up to the detector).

Regarding claim 6, Besson discloses the scatter mask is adapted to allow for the effect on scatter of time delay integration in the detector (column 18 lines 40-19 disclose that the model takes time delay integration into account).

Regarding claim 11, the rejection of claim 6 discloses time delay integration and column 25 line 45 discloses taking into account beam intensity when calculating the scatter model. No additional compensation is taken into account and therefore the

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system assumes that the energy for each pixel is the same since it does not compensate otherwise.

Regarding claims 12 and 14 please see the rejection of claim 1 and figure 1 as it discloses all aspects of claim

Regarding claim 13, see figure 12 item 114 and column 9 lines 33-47 as it discloses an imaging system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson in view of Dewaele (5651042).

Regarding claim 7, Besson does not explicitly disclose using a piecewise linear function, although Besson does disclose taking spatial dependencies of grids in column 16 lines 5-12. The examiner believes that the spatial dependencies of a collimator is naturally a piecewise function.

Dewaele discloses that effects collimation represents a piecewise linear function (see column 3 line 66 to column 4 line 17 as it discloses that collimation is piecewise linear)

It would have been obvious at the time of the invention to one of ordinary skill in the art to explicitly include in Besson a determination that collimation represents a piecewise linear function as taught by Dewaele. The reason for the combination is because it makes for a more robust system that alter its mathematical model in cases where collimation is present.

Regarding claim 8, the examiner takes official notice that it would have been exceedingly obvious at the time of the invention to one of ordinary skill in the art at the time of the invention to include in Besson and Dewaele the fact that a piecewise linear function may have a saw tooth pattern. The reason is because it is mathematically well known that a sawtooth pattern is a typical kind of piecewise linear function.

Regarding claim 9, Besson discloses the scatter mask is adapted to allow for the effect on scatter of time delay integration in the detector by forming it from a sum of elemental scatter masks which are adapted from a conventional scatter mask (column 16 lines 6-11 discloses interpolating, column 18 lines 14-19 disclose time delay integration and column 18 line 36 to column 25 line 60 disclose how the scatter mask is formed from the conventional or basic scatter mask. The final scatter mask incorporates elements from many basic scatter masks).

Regarding claim 10, the rejection of claim 7 discloses a piecewise linear function which inherently sets values of 0 outside of areas of illumination.

Conclusion

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3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Young et al. (6836570, disclose an image enhancement method for digital images having collimation fields).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Akhavannik whose telephone number is 571-272-8622. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571)272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER